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LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interest of Lake Carriers, and improve the character of the service rendered to the public.

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A CHICAGO STEAM YACHT.

George Warrington, the Chicago yacht builder, has just completed designs for a steel steam yacht which will probably be built by the Chicago Shipbuilding Co., although the contract has not yet been awarded, to the order of Mr. H. F. Balch, of Minneapolis, who made his fortune as a railroad contractor, and afterwards gained control of some of the street railway systems in the northwest. Active construction on the New Alcyone will begin early in March, and she is to be ready for sea by September, at which time Mr. Balch contemplates taking a trip to the West Indies, and spending the winter in the equatorial regions.

The New Alcyone will be 135 feet in length over all, 17 feet beam, 11 feet molded depth and 8 feet draft. Her displacement will be 144 tons. Her engines will be of the triple expansion, inverted cylinder type, with cylinders 12, 19 and 32 inches in diameter by 18 inches stroke of piston. Her two boilers will be of the water tube type, and she is to be guaranteed a speed of 18 miles per hour with a 6½ foot wheel, with a 14-mile speed for ordinary occasions. The model shows very fine lines. She will have two spars, 66 feet high above the deck, and her jibboom will extend 22 feet beyond the rail. In the way of canvas the yacht will carry foresail, main-sail, fore and main gaff topsails, jib, jib-topsail and staysail, a total spread of 3,000 feet. Her coal capacity is 32 tons, and room could be found to store additional fuel.

The steel plates to be used in the hull will be 5-16 inch at the garboard and sheer strakes, the rest being ¼ inch. Her deck houses will be of steel, covered with mahogany and the interior will be finished in the same woods.

The New Alcyone will carry an ice machine, and an electric storage battery plant for lighting and cooking purposes. The yacht will be equipped with a powerful searchlight. She will carry an electric launch 24 feet long, a life boat 22 feet in length, and a dinghy 16 feet long. She is expected to cost $100,000.

SALVAGE SERVICES.

In a recent salvage case, Judge Brown, U. S. District Court, Southern District of New York, who is one of the most skilled admiralty judges in the United States, supported the views of Mr. Justice Bradley, rendered in a former decision and quoted it as being one of the best expressions of the objects to be kept in view of salvage awards.

Mr. Justice Bradley said: "Salvage should be regarded in the light of compensation and reward, and not in the light of prize. The latter is more like a gift of fortune conferred without regard to the loss or sufferings of the owner, who is a public enemy, whilst salvage is the reward granted for saving the property of the unfortunate, and should not exceed that which is necessary to insure the most prompt, energetic and daring effort of those who have it in their power to furnish aid and succor. Anything beyond that would be foreign to the principles and purposes of salvage; anything short of it, would not secure its objects. The courts should be liberal, but not extravagant; otherwise, that which is intended as an encouragement to rescue property from destruction may become a temptation to subject it to peril. In furtherance of the foregoing views several cases are cited showing the necessity of encouraging salvage services through suitable rewards to masters and crews.

BIDS FOR TORPEDO BOATS.

The greatest interest was manifested last week by the shipbuilders of the country, with the exception of lake shipbuilders who were not considered eligible to bid for torpedo boats on account of treaty stipulations with England not permitting naval vessels to be built on the lakes. The competition, as shown by the proposals, was quite sharp. The contracts differed from others formerly issued in that they contained no speed premium, but retained the deduction feature, if the vessels did not come up to the contract speed of 24½ knots. Another difference was that the bidder was permitted to submit a proposal for constructing a vessel of material other than steel. This was taken advantage of by the Herreshoff Manufacturing Co., which made a proposition to construct the boats, with the lower hull, keel, stem and sternposts made of high bronze, and upper works and coal bunkers of aluminum. The general dimensions of the boats were as follows: Length, 160 feet; beam, 16 feet; tonnage, about 138, or 18 more than the Ericsson; coal capacity, 43 tons. Engines, triple expansions, twin screw of 2,000 horse-power; speed, 24½ knots, or half a knot more than the Ericsson. Bidders were allowed to submit two kinds of proposals, one under the department's specifications and one under their own designs. This last permission was freely availed of, and some bidders submitted several sets of original designs.

The bids were as follows:

Bath Iron Works, of Bath, Me., for all three boats, udner the department's designs, $142,000 each, or $426,000 in all.

John Dialogue & Sons, of Camden, N. J., under the department's designs, for one boat, $139,000; for two boats, $137,000 each, or $274,000 for the pair; for three boats, $136,000 each, or $408,000 total.

Columbia Iron Works, of Baltimore, under the department's design, for one boat, $107,000; for two boats, $103,000 each, or $206,000 for both; for three boats, $97,500 each, or $292,500 for all.

Hugh Ramsay, of Perth Amboy, N. J., his own designs, for all three boats, $438,000; another set of his own designs, for all three boats, $378,000; under the department's designs, for all three boats, $378,000; another bid under the department's designs, for all three boats, $347,700; another set of his own designs, for all three, $347,000.

Union Iron Works, of San Francisco, under the department's designs, one boat for $135,000; two for $129,000 each, or $258,000 for both; three for $120,000 each, or $360,000 for all; under their own designs, one boat for $125,000; two for $120,000 each, or $240,000 for both; three for $116,000 each, or $348,000 for all. Another set of their own designs for one boat of 240 tons and a speed of 28 knots, $243,000.

The Fulton Engineering & Shipbuilding Works, of San Francisco, under the department's designs, for one boat, $148,000; for two $290,000, or $145,000 each.

The Iowa Iron Works, of Dubuque, for all three boats, under the department's designs, $411,000, or $137,000 each.

The Herreshoff Manufacturing Co., of Bristol, R. I., under their own designs, for three steel boats, $113,850 each, or $341,550 for all; under another design, with the lower hull, keel, stem and sternposts of high bronze, and upper works and coal bunkers of aluminum, for all three boats, $414,000, or $138,000 each; another design of composite type for two boats, $276,000, or $138,000 each, and one steel boat, $113,850, another design; one composite boat for $138,000 and two steel boats for $113,850 each, or $227,700 for the last pair.

The bids of the Columbian Iron Works were erroneously made on the form for Class 2, under which the bidder builds the boats on his own designs. As this firm is the lowest bidder, it can be seen that the question is a very nice one. No awards will be made until the board of construction has examined the bids and designs submitted and made its report to the secretary. The general impression, however, is that the Union Iron Works will get one of the contracts, as it is the desire of the department to have one of the vessels constructed on the Pacific coast.

There has been set aside for the expenses connected with the armament of the boats $25,000 each. They are to be armed with three 18-inch torpedo tubes, each of which is to have four Whitehead torpedoes, 18 inches in calibre, and each will carry three one-pounder rapid fire guns. The torpedo launching tubes are to be mounted on deck in a similar manner to breach-loading rifles, having a train to all points of the compass and can discharge their bolts of dynamite, not only when running at full speed, but in quite a seaway as well.

NEWS AROUND THE LAKES.

CHICAGO, ILL.

Special Correspondence to The Marine Record.

The Nyack arrived at Muskegon Tuesday from Milwaukee with 53 carloads of freight. She encountered very little ice.

The suit of the Sturgeon Bay Canal Co. against Leathem & Smith, for non-payment of tolls, will be tried here soon. The amount sued for is $3,000.

Officials of the Goodrich Transportation Co. were at Muskegon Tuesday, and awarded a contract for a $3,000 office and warehouse for the new docks erected there by them this fall.

The repairs recently compleled on the steamer Servia cost about $20,000, and were necessitated by her striking heavily during her last passage up the lakes in November, 1894. She required new keel and garboards, nearly 150 feet of new bottom plank, new shoe, stern pipe and calking.

The two 405 foot freight steamers now building at the South Chicago yard for the Zenith City Transit Co. and the Interlake Co. will each be equipped with two direct-connected engines and multipolar dynamos to operate 250 electric lights each. Each of the three barges, two for the Minnesota Steamship Co., and one for John Corrigan and others, of Cleveland, will have a direct connected plant and 125 lights.

CLEVELAND. O.

Special Correspondence to The Marine Record.

Capt. George P. McKay is in New Orleans.

Capt. Thos. Wilson has returned from his trip to the South.

Mr. M. A. Bradley has not yet returned from California.

Capt. F. D. Herriman, of the Bureau Veritas, was in the city Wednesday.

The steamers Spokane and V. H. Ketcham are in dock this week at the Shipowners' dry docks.

The Cleveland Dry Dock Co. docked this week three tugs: Steel steamer, Northern Light and the H. B. Tuttle.

George Elsey, Jr., manager of the Cleveland Towing Co., has been at Muskegon during the week, with a view to purchasing the tug C. G. Crosby for his company. It is not learned that the deal has been closed, but the Crosby is held at $11,000.

The Northern Transit Co. has begun suit against the city of Cleveland for damages in the sum of $20,000. The basis of the suit is that the Superior street viaduct has damaged the company's property, consisting of a building and wharves at the foot of Superior street. The city will fight the suit.

The shipyards have considerable work on hand, and are employing a large number of men; but during the week the boiler-makers took a stand for higher wages, and as the riveters belong to the same union, there may be a cessation of work for a day or two, until the question of wages is adjusted.

The proprietors of the *Marine Review* deny the report sent out by THE RECORD'S Buffalo correspondent to the effect that Mr. J. C. Fitzpatrick would soon assume the business management of the *Review* and positively state that Mr. Fitzpatrick does not now, nor ever had, any financial interest in their paper.

Three new offices have been opened in the Perry-Payne building this week. Capt. Dan. McLeod, manager of the Inland Lloyds, has removed from the Atwater block to room 811 of the Perry-Payne, and Capt. W. S. Mack has taken the office next door, room 812. Capt. John Hall, who managed the whalebacks last year, has opened up a brokerage office on the fourth floor.

The series of addresses now being delivered at the Shipmasters' Association rooms on Wednesdays, are of such a character as to arouse interest and discussion on subjects directly connected with the duties of shipmasters. The topics touched upon this week at the meeting were compass corrections, the new "rules of the road" and stellar observations.

The newly formed Cleveland Lodge, No. 1, of the Lake Pilots' Association, elected and installed its officers last Saturday night, as follows: Captain, James Buchanan; first officer, Thomas Green; second officer, F. A. Crockett; quartermaster, W. B. Clendenning; chaplain, Frank Dennis; purser, Thomas Allen; lookout, P. J. Carson; watchman, David Van Dusen. Capt. Joe Gorman was elected commodore, this being an honorary office.

DETROIT, MICH.

Special Correspondence to The Marine Record.

The steamer City of Cleveland; of the D. &. C. line, is getting her bottom cleaned at the Detroit drydock.

The steamer J. S. Long, which will ply between French River, Killarney and Detroit this year, is having her cabins enlarged, with a view to getting more staterooms.

In the case of Willlam Look and others against the schooner Brightie for damage done to the yacht Josephine, at Marine City, in August, 1893, Judge Swan dismissed the libel, with costs.

The officials of the Sandusky & Islands Steamboat Co. have offered the hull of the old City of Sandusky for sale. The vessel has been entirely dismantled, and nothing now remains except the hull and a portion of her cabins. She is lying here, and if sold will be cut down and altered into a tow barge.

The tug McCormick, of Grand Haven, is to be brought to this port for towing purposes this spring. According to the Toledo *Blade* Capt. Cook has become the sole owner of the sandscow Companion, and will trade here with her. Capt. Doville is now sole owner of the Commerce, which will trade to Toledo.

The Detroit and Cleveland boat service will probably start on March 20, if at all practicable.

Joseph Cottrell has sold one-twentieth of the steamer St. Lawrence to Horatio T. Morley, for $4,375.

G. Ash Tomlinson has purchased one-twelfth of the steamer Thomas Cranage from J. W. McGraw, for $12,000.

Mr. W. Richardson, of Marquette, a large lumber shipper, has contracted with the steamer John B. Ketcham and consort Montgomery to carry 30,000,000 feet of lumber from Marquette to Cleveland, which will make fifteen cargoes for the two vessels.

Lieutenant S. M. Landrey, of the revenue cutter service, has been detailed as assistant inspector of the ninth and tenth life-saving districts, and will soon be in Detroit to relieve Lieutenant J. C. Moore, who has been filling that position three years. Lieutenant Landrey is about thirty years old, and a graduate of the training ship Salmon P. Chase, at New Bedford, Mass. He graduated in 1888. His field of operations will comprise Lakes Superior, Huron, Erie, and possibly Ontario. It is not known where Lieutenant Moore will be ordered, or whether he has received any instructions yet.

BUFFALO, N. Y.

Special Correspondence to The Marine Record.

Calbick, Palmer & Bone, vessel and insurance agents, have removed their offices to 186 Main street, room 5.

Passing Russell & Watson's I noticed a very elegant set of brass signal lights for the steamer North Land, on display in their window.

The Buffalo Forge Co. has arranged with Mr. James Corrigan to equip the Australasia, Bulgaria, Italia, and Caledonia with their forced draft system.

The claims of H. K. Wick & Co. against the excursion steamers Pearl and Gazelle is $2,600, and not $26,000, as a typographical error made THE RECORD state last week.

Advices from Chicago state that 1¾ cents on corn for winter storage and spring delivery is being offered and that but few cargoes are obtainable even at this low figure.

Sutton Bro.'s are building a marine steeple compound engine, with cylinders 14 and 7 by 10-stroke, for Frank Stable, Buffalo, to be placed on a steam pleasure yacht he is building.

Capt. R. C. Soper, the newly appointed harbor master at this port, took charge March 1st. It is his intention to carry out the duties appertaining to the appointment in a strictly ship-shape and business-like way,

The ice in the Blackwell Canal has prevented vessels that are holding grain from reaching the elevators this week. It is expected, however, that the ice will be decayed enough in a few days to let them break out.

There is a growing demand for a new bridge at Michigan street. The present structure is a menace and a hindrance to lake navigation. Both passenger and freight interests are unanimous in their demand for its removal.

There is no truth in the rumor that Mr. Fitzpatrick intended leaving this port for Cleveland, to take charge of the *Marine Review*. Mr. Fitzpatrick emphatically denies that he is now or ever has been financially interested in that journal.

Mrs. D. G. Dannecker, 156 Ohio street, intends to continue the vessel supply business, carried on by her late husband, with the assistance of her brother, Lewis Fellner, who has been book-keeper and clerk in the store for the last thirteen years.

Recent soundings taken by Major Ruffner, of the United States Engineer Corps, prove very unsatisfactory, revealing an extent of soft bottom which is, he says, utterly unfit for a breakwater if built on the old crib system. Major Ruffner thinks he will have to fall back on the mattrass plan for his foundations.

The Mills Dry Dock Co. has recalked the top sides of the steamer Italia. She will go into dock and have her bottom recalked and her iron rudder taken out and receive a new wooden rudder with steel sleeve and wings. The steamer commodore has received a new keel and garboard, some new bottom plank and some recalking.

The Buffalo captains are varying the usual routine of meetings by a few social events, in which the ladies have taken charge. The Mariner's Club poured in upon Capt. Killeran, superintendent of the Northern Steamship Line, and enjoyed a merry evening. Miss Aggie Todd, daughter of Capt. James Todd, will be the hostess next Friday evening.

The Bell Steam Engine Works have contracted to build a steel tug for the Lehigh Valley Railroad Co., to be used for handling their tow barges on Lake Ontario. Her dimensions are 68 feet over all, 17 feet molded beam, 10 feet depth of hold; engine fore and aft compound condensing, 12 and 25 by 20; boil r, return flue marine, 6 feet 9 inches by 11 feet 6 inches.

While not officially announced, it is currently reported, and on good authority, that Capt. E. N. Smith, who has for years sailed the Northern Queen, will have command of the steamship North West this season Capt. Campau is to bring out the North Land. It is understood that there will be several promotions in the fleet this spring, especially among the crews of the Northern Queen and Northern Light. Capt. Haberner, who was on the Light last year, will sail the Globe this season.

The grain trade is at work on a problem looking to the bulking of lake grain cargoes. This plan has been tried many times, and has failed, because the milling interest was so strong, and that has, of course, insisted on keeping the identity of the grain. There is now a proposition to set aside such cargoes as the holders desire shall be kept separate, so that the plan promises to succeed. This will add considerably to the actual capacity of the elevators.

While it is possible that the Crescent Line will never again be actively engaged in lake freight business, the company will remain organized so long as the charter of its boats to the Union Line holds good. The charter is for three years instead of one, as has been generally announced. It is informally announced that there will be few, if any, changes of masters or engineers. The Union Line does not get possession of the boats until April. The Stevens is here receiving large repairs to to her boiler; the Fisk is getting new arches at Detroit. The Nicol and Moran are now holding wheat at Detroit.

Several tugs damaged themselves in trying to get through the ice to the John Mitchell, which has a cargo of grain to discharge at the Niagara elevator. Her owners will make no further effort to move the Mitchell until the situation changes.

Charles S. Dakin has been appointed western sales agent of the big coal firm of Graeff, Wilcox & Co., of Philadelphia, which is a new firm in this market. Mr. Dakin has the territory west of Syracuse, and intends to do some shipping by lake. The coal will probably be handled by the Erie.

PORT HURON, MICH.

Special Correspondence to The Marine Record.

Large quantities of ice continue to flow down stream at intervals.

The St. Clair River is now clear of ice to a point about three miles below Algonac.

Mariners up here incline to the opinion that navigation will open very early this year.

John Roy, who has been a member for some years of the life-saving crew at Tawas, was married last week at Alpena to Miss Phebe Nedeau.

The marine engineers are very busy just now, getting out their new manual for 1895. It will eclipse all former editions, both in size and appearance.

For some time past Alex Jamieson, a well-known lake engineer, has been a great sufferer from cancer on his

lip. He has now had it cut out, and has hopes for entire recovery.

The steamer S. C. Baldwin, which was sunk by the steamer Iron King last summer, was placed in the Wolverine dry dock to have a new bow put on, and also to have her cabin repaired, where it was damaged by fire last fall.

The survey party which is engaged in taking soundings at the foot of Lake Huron, as preliminary work on the 21-foot channel, have located a reef of considerable dimensions, with only 15 feet of water over it, bearing north by east from Fort Gratiot light.

James Thompson and family, who have spent the last year at Delhi, La., will return to Port Huron. The family have built a large boat, on which will be loaded the furniture and household effects. The outfit will make the journey almost entirely by boat.

The steamer T. D. Stimpson is being thoroughly overhauled, both hull and machinery, and is being converted into a double decker. She has a three years' charter to carry sash, doors and blinds, and other manufactured stuff from Bay Mills to Buffalo. Captain John Hayes will command her.

The rumor is that the fast steamer Unique is to have the dock at this port belonging to the new St. Clair County Bank, on the south side of Black River, near Military street bridge, and will have her waiting room and ticket office in the bank building basement. If such is the fact, she will have a fine landing, and passengers will be landed in the heart of the city. She will land at the J. C. Miller property in Marine City.

MILWAUKEE, WIS.

Special Correspondence to The Marine Record.

The schooner Henry C. Richards is getting $500 worth of repairs to her stern.

Work on the steamer R. H. Seymour, at Sturgeon Bay is rapidly nearing completion.

The schooner Exchange is preparing at Kewaunee for the opening of navigation.

Capt. Peter Peterson will command the steamer J. M. Allmendinger the coming season.

The tugs Milwaukee and Knight Templar have been placed in commission for the season.

Capt. J. M. Clow, of Marinette, will command the Hart Line steamer C. W. Moore next season.

Capt. Andrew Larson is doing considerable work at Bay View on the schooner H. C. Winslow.

It is said that the steamer Osceola will at once resume her trips between this port and Grand Haven.

Capt. Schenkenberg expects to sail from Racine April 1, with the schooner Rob Roy. He will go to Bailey's Harbor for wood.

The old schooner George Barber has been raised from the bottom of the river at Racine. She is to be towed out on the lake and cast away.

The steamer E. A. Shores has been chartered for three cargoes of grain, Chicago to Milwaukee, and will leave for her first load in a few days.

A blizzard delayed winter navigation somewhat on Sunday. The schooner H. Rand is receiving a new deck and other repairs at Racine.

H. J. Pauly has contracted to have a Scotch-type boiler built for his steamer Westover. She was not in commission all last season.

In Detroit harbor, near Death's Door Passage, Capt. Peter Hanson is giving the schooner O. M. Hanson a complete new stern, deck beams, deck, covering board, stanchions, rail and bulwarks.

Capt. Thomas Richardson, who has many friends in the lake fraternity, suffered a stroke of paralysis a week ago last Sunday He was at last accounts reported better. Capt. Richardson is the owner of the steamers Skater and Hilton.

The Hart Line steamers C. W. Moore and Welcome will make daily trips between Green Bay and Escanaba during the coming season. The Fannie and Eugene Hart will follow out last year's program of one trip per week to Mackinaw.

A Grand Haven paper says that Capt. W. F. McGregor of this city, will command the steamer City of Milwaukee next season, succeeding Capt. D. McLachlan, of Detroit. Capt. McGregor says that the report has no foundation in fact.

Arrangements have been made by the managers of the Christopher Columbus for the use of the dock between the Broadway bridge and the Mann warehouse dock, where she formerly landed. A shed one story high with a frontage of forty feet and extending back to the dock line, is being erected for the traffic of the big whaleback.

The Trilby, the new Milwaukee racer, is now all in frames, and planking will be completed in about two weeks. As she assumes form the fine lines of the yacht are apparent, and if predictions go for anything she will be the swiftest boat on the lake.

Fred W. Martin is at work on plans for a fine 70-foot schooner yacht for Milwaukee parties, and is now about to close a contract for a 50-foot steam yacht for a local owner. She will be elaborately fitted up and used as a pleasure craft, and the intention is to make her the finest cruiser on the lakes. There will be many much larger, but none so superbly furnished.

The Wisconsin & Michigan Railroad has a plan on foot for the construction of three barges for ferrying cars across Lake Michigan. The barges will be of the scow order, but will carry four tracks with capacity for five cars each. Three arches of solid timber will afford the necessary longitudinal strength. The company expects to be able to transfer cars between Peshtigo and Chicago for eight or nine months in the year, when the boats would go to Frankfort if suitable arrangements can be made there.

BAY CITY, MICH.

Special Correspondence to The Marine Record.

The boilers which were removed from the burned tug Sea Gull are being rebuilt here. One of them will be placed in the tug Manistique, and the other in the Parker, owned by James Reid.

Capt. John Beigh, of Toledo, was in the valley the other day, looking for a tug. It is understood that he has purchased the tug Jessie P. Logie for himself and for the Knickerbocker Ice Co. F. W. Wheeler & Co. will put steam winches, pumps, etc., on the schooners Noque Bay and Manantee.

It is stated that Bigelow Bros., a well-known Chicago lumbering firm, are negotiating with Capt. James Davidson, of West Bay City, for the purchase of one of his large new lumber-carrying steamers, with the intention of turning the steamer Robert Holland in part payment.

Forty lumbering plants on the Saginaw River during the past year produced 481,244,000 feet of lumber, the smallest output since 1868. High water mark was reached in 1882, 1,011,274,905 feet. Since that time the output has steadily decreased.

D. MAGONE, of Ogdensburg, has had an interview with Ministers Bowell, Quimet and Angers, at Ottawa, in reference to canal tolls on westbound freight. Magone is in the forwarding business, and represents that all branches of the business would benefit were canal tolls reduced on freight rates destined for the west. Apropos of Magone's representations, the impression is general that a radical change must take place soon in the Canadian government's policy in reference to canal tolls. Although no formal order has been passed, it is understood that the Sault canal will be free, simply because the Michigan canal on the other side of St. Mary's river is free.

APPOINTMENT OF OFFICERS FOR 1895.

	MASTER.	ENGINEER.
WILLIAMS TRANSPORTATION CO., SO. HAVEN.		
Str. City of Kalamazoo	David Morris	Perry Knaggs
" H. W. Williams	John Boyne	Alfred Green
" Glenn	Frank Swails	John Larell
" Lorain L	Joe Warner	Tom. Jinkins
VULCAN TRANS. CO., DETROIT.		
Str. Forest City	Joseph Sanders	John Erving
" R. J. Hackett	Henry Sanders	Daniel Harkins
Schr. W. McGregor	Jno. Hochrath	
" H. H. Brown	Thomas Sanders	
C. T. MORLEY, MARINE CITY.		
Str. St. Lawrence	Ralph Byrns	Tip. Durant
" J. J. Hill	John Andrews	M. Britz
M. J. CUMMINGS, OSWEGO, N. Y.		
Str. C. S. Parnell	P. Griffin	.....
" Mont Eagle	Wm. Griffin	.....
WM. Y. BOTSFORD, PORT HURON.		
Str. Colorado	Rob't McLeod	T. H. Birch
" Osceola	John McLeod	L. T. Morrill
GRAHAM & MORTON, BENTON HARBOR.		
Str. City of Chicago	Chas. McIntosh	Wm. McClure
" R. C. Reid	John Griffin	Wm. Brown
WEST DIVISION STEAMSHIP CO., MILWAUKEE.		
Str. Fred. Pabst	D. C. Sullivan	James Bennett
" Wm. H. Wolf	F. A. Graves	Tho. Albrighton
THE BUCKLEY & DOUGLAS LUMBER CO., MANISTEE.		
Str. Edw. Buckley	Chas. Gnewuch	Richard Winkler
W. A. LIVINGSTONE, DETROIT.		
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CHIEF OF THE U. S. LIFE-SAVING SERVICE.

With a brief synopsis of the U. S. Life-Saving Service, we herewith present to our readers a portrait of the Hon. Sumner I. Kimball, general superintendent of the life-saving service—a service which, in its functions, history and achievements is one of the most interesting departments of the general government. Other branches have about them an atmosphere of business alone, the collection of taxes, the enforcement of commands and prohibitions—thou shalt and thou shalt not—but the life-saving service lies so much within the field of humane and heroic endeavor, its interpid work is so thoroughly philanthropic that it reaches the sentiments and touches the hearts of all classes of citizens.

Mr. Kimball, its chief, was born in Maine, graduated at Howdoin College, and bred to the profession of the law in the office of a distinguished member of the bar of the Pine Tree State. In 1868, he was appointed chief clerk in the office of the second auditor of the treasury at Washington, where he remained until 1871. Early in that year he was invited by the secretary to take charge of the revenue cutter service which was deemed urgently needful of re-organization. For the following seven years he remained in control of that establishment, and raised it to a basis of efficiency surpassing that of any prior period, while at the same time its current expenses were very considerably curtailed. Hitherto that service had conspicuously suffered from political interference, and there Mr. Kimball made his first fight as a public officer to drive political favoritism out of a field with which politics had not the slightest legitimate relation.

All there was of a life-saving organization at that time was connected with the revenue cutter service. It was inconsiderable in scope and comparatively without system. The entire means at its disposal for life-saving operations consisted of a few dilapidated boat-houses on the coasts of Long Island and New Jersey, meagerly supplied with old boats and poor equipment. The boats were in charge of keepers often living a distance from the station and on occasions of wrecks crews were gathered from those among the inhabitants who might volunteer to brave the perils of the surf with the scant equipments supplied. Hardy and courageous indeed were they who would do this. The preceeding 20 years had witnessed no material improvement in life-saving methods or appliances on these coasts, and the loss of life by shipwreck was not only appalling, but much of it obviously needless.

Profoundly impressed with these lamentable conditions, and thoroughly convinced that every consideration of humanity and decent government demanded a radical reformation, Mr. Kimball at once took up the work. The first requisite to success was an intelligent scheme of re-organization, and the second, the pecuniary means to carry it out. When the former had been devised the latter was promptly requested of congress. Upon the suggestion of Mr. Kimball the sum of $200,000 was recommended by the secretary and was forthwith appropriated, the act bearing date of April 20, 1871, and providing that crews might be employed at such stations as the secretary of the treasury should deem necessary, at a rate of compensation not to exceed $40 per month—the pay of keepers at that time being $200 per annum. The judgment of the secretary was that crews were necessary at all stations, and accordingly they were so employed.

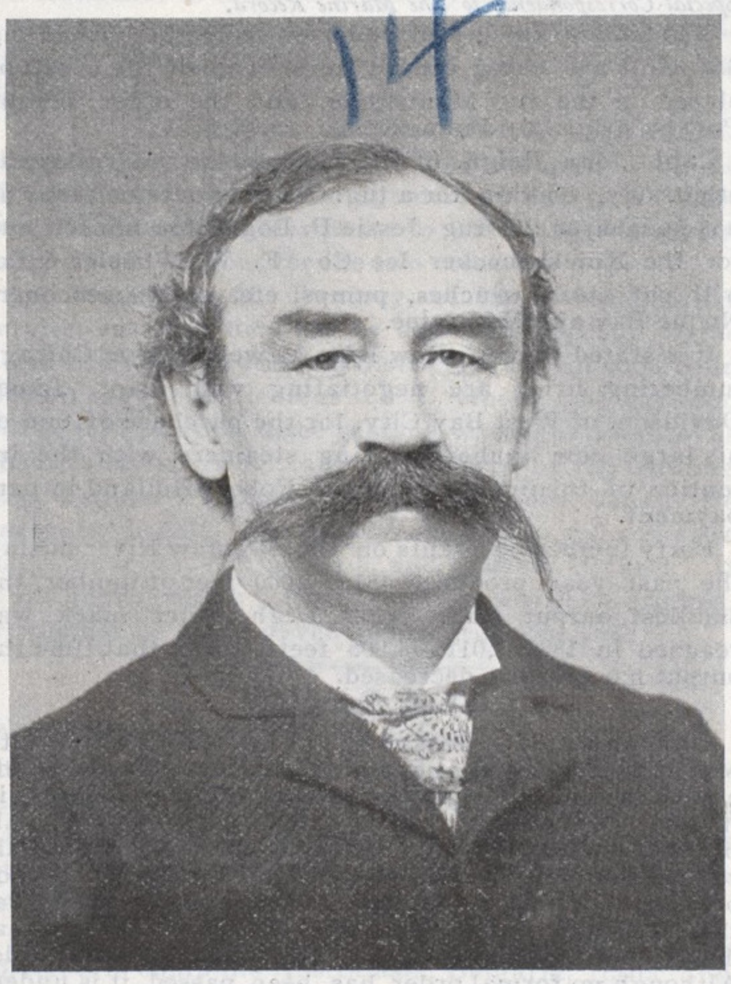
Besides the permanent improvements accomplished with this appropriation, the immediate and almost marvelous result was that, although during the season of 1871–2 there were serious disasters, not a single life was lost on the coasts to which the expenditure was applied, where hundreds had previously perished in a single year, and an average of upwards of 25 annually during the two preceding decades.

Well deserved applause rewarded this remarkable record, public interest was intensified, and congress heartily responded to the demand that a service so bountiful of beneficial fruits in a single year should be extended to other perilous places, both upon the ocean and the Great Lakes, where the shipwrecked mariner had hitherto been left helpless to the storm.

During the next seven years the establishment was very much enlarged and everywhere maintained its good record. Within that period there occurred on the New Jersey coast 180 disasters involving the lives of 1,909 persons of whom only 18 were lost, and as to these it was shown by thorough and impartial investigation that not one was lost which it was within the possibility of human effort to save. And this, let it be remembered, in a locality in former years proverbially the most dangerous on our seaboard.

Up to this time (1878) the life-saving establishment remained in charge of Mr. Kimball, but still incidently, in connection with his duties as chief of the revenue cutter service.

Now, however, it had grown to such proportions that its proper supervision was sufficient to require the attention of an officer unincumbered by other official responsibilities. The secretary of the treasury recognized this fact, and congress took the same view. Accordingly on the 18th of June, 1878, an act was passed by the unanimous vote of both houses providing for its organization into a separate bureau of the treasury department, and for the appointment of a general superintendent to have it in charge. No other name than Mr. Kimball's was suggested, or appears even to have been thought of, and the president lost no time in nominating him to the senate, while that exceedingly deliberate body was equally swift in awarding him unanimous confirmation, without so much as the usual reference to a committee. At last the new service was on its feet, proud of its record, abounding in vigor, and eager to add fresh laurels to its growing fame. The chief was in the prime of life, determined of purpose, fertile in resources, and animated with but one ambition—that the life-saving service of the United States should stand second to none in the world. Old boats were condemned and better ones supplied, antiquated ordnance was discarded and improved devices were invented, dilapidated buildings were repaired or replaced, and new stations appeared in numerous treacherous places. By the same act the compensation of keepers was advanced from $200 to $400 per annum—that of surfmen, however, remaining at $40 per month.* Better men for keepers now became available, and the ablest picked surfmen that the wages would fetch were secured. The period during which the stations should be opened and manned was also extended by the law to include the eight months falling between the 1st of September each year and the 30th of the following April on the Atlantic coast, and from the opening to the close of navigation on lakes. The lifeboat system on the lakes was also re-organized, and the brave men who had hitherto shed enviable glory upon the service along the shores of these immense internal waters, under the most disadvantageous conditions, now began to receive far more equitable consideration.



HON. SUMNER I. KIMBALL.

One of the very first conditions adverse to the efficiency of the service that impressed itself upon Mr. Kimball when he took charge in 1871, was the fact that while the stations were generally far apart and the beaches were not patrolled, there was always present the possibility that a ship might strand in the night, and all on board be lost before the disaster could be known to the life-saving crews. There was obviously no way to avoid this deplorable condition except to require the surfmen to patrol the entire limits of station operations during every hour of darkness from sunset to sunrise. But to do this was to impose upon them a task of almost immeasurable hardship, and oftentimes of extreme danger. However, the necessity seemed inexorable, and in the winter of 1871 the system was established. Very little friction ensued, and so admirably has it worked that to-day nobody would for a moment entertain a thought of its discontinuance. At the present time every foot of the shore between stations sufficiently near together, and for long distances each side of the isolated ones, is nightly traversed by the faithful patrol, breasting the storm, wading the gullies, fording the streams, surmounting all barriers, his watchful eyes bent upon the sea, and his red signal at his side ever ready to flash out its friendly warning of danger or assurance of help.

There is only one other feature of the life-saving service so essential to its usefulness, and that one is its non-partisanship. *Life-saving is not a political function*, and the general superintendent commenced at a very early date to impress that idea upon both the public and the official mind.

Of course there were those who argued that an abundance of good surfmen could be found in the dominant party. Such a possibility nobody denied, but the point was that when the keepers and crews should be appointed because they belonged to the prevailing party, their selection would depend upon their expertness as political heelers, not as professional surfmen, and these were not likely (as experience in small politics has shown) to be the best, even of their kind. Possibly (and only possibly) even they might in time be made good surfmen under the training of a proper keeper, but before that could be accomplished, if at all, a reversal of party supremacy, involving perhaps no more than the election of a town constable, would call for the appointment of a new crew of political incapables—this process to go on forever. Meanwhile the spiwrecked might drown in the surf or freeze in the rigging.

In the opinion of the general superintendent, there must be but one test, professional fitness—that and that only. Creed, relationship, race or politics could not enter into the question. To this end, against the timid warnings of friends and the ominous admonitions of opponents, Mr. Kimball determined to devote every energy at his command. With only the moral force of a sound proposition to back him, he began the battle promptly, and kept it up like Grant in the Wilderness.

In his annual report for 1877 he states that the schemes of the local small politicians "have obstructed and retarded the effective organization of nearly every new district." In some cases they had succeeded in manipulating and even intimidating the local officers to the extent that a very considerable percentage of totally incompetent political parasites had got into places as surfmen and even keepers. Of those whose hands were still bent to evil, he forcefully remarks: "They would probably consider it hard fortune to find themselves in imminent peril upon a wreck swept fore and aft by the winter storm, condemned to look for deliverance to life-saving crews of their own selection."

Four years later, in the report of 1880, the discussion continued in the following words: "The purpose for which the establishment is organized is simply *to save life* from wrecks, and secondarily, property, and to most effectually carry out this purpose the service must not be conducted in the interest of any platform or party. * * * The service is one of experts and its agents must be the ablest trained professionals that can be secured. * * * If a capital operation is to be performed to save the life of a patient we send for a surgeon. We raise no question of creed or party—we want a surgeon, and we want the best. When a vessel is breaking up on a lee shore, the case is equally one of life or death, and to the exclusion of every other consideration is the highest professional ability required. * * * The time may come when the trained surfmen in the station may give way to mere party hacks, but if it does come, from that day the usefulness of the service will be on the wane." A statute was therefore recommended by the general superintendent which should by express words prohibit the consideration of political or party affiliations in making appointments.

At last (in 1882), after ten years of devoted effort both by precept and practice, the end crowned the work. By the act of May 4, 1882, congress provided that: "The appointment of district superintendents, inspectors, and keepers and crews of life-saving stations shall be made solely with reference to their fitness, and without reference to their political or party affiliations." This act of congress was the greatest boon ever conferred upon the life-saving service, and the fact is worthy of remark that it was also the first law of the kind ever enacted by the United States. True, the battle is not over, for there will always be some rough rider who has not heard of the statute, but the service now maintains its defence behind the impregnable shield of the law. Under this mighty protection it has steadily advanced from height to height until to-day it stands at an eminence conceded to be far above that of any other life-saving organization in the world. So much for single-hearted, consistent, brave and honest fidelity to one high purpose.

*NOTE.—The present rates are $60 per month for men who serve a term of more than eight months, $65 per month for those serving eight months or less, $900 per annum for keepers of fully equipped stations, and $600 per annum for keepers of houses of refuge.

THE Buffalo canalmen are getting uneasy over the refusal of the forwarders to come to an understanding. In order to stir up the forwarders, the canalboatmen met and passed a resolution stating that it was the sense of the meeting that there should be formed a pool on some fair business plan that would insure a fair and uniform rate of freight which would be in the interest of boatmen and in harmony with the general business. The canalboatmen are greatly pleased with the new shoveling arrangement and say that the excessive charges for trimming the canal boats were accountable for the failure to hire trimmers when they could be done without and the building of boats that do not need trimming. The new 75-cent rate will bring more work to the scoopers than the old $1.25 rate ever did. As the new shoveling rate cuts off all rebate abuses in grain elevation the boatmen now demand that a clean sweep be made and the rebates paid by the insurance agents to the grain receivers be cut off, too. The rebate has been increasing every season lately till it is now $5 a boat-load.

THE EDMISTON PATENT FEED-WATER FILTER.

(ILLUSTRATED.)

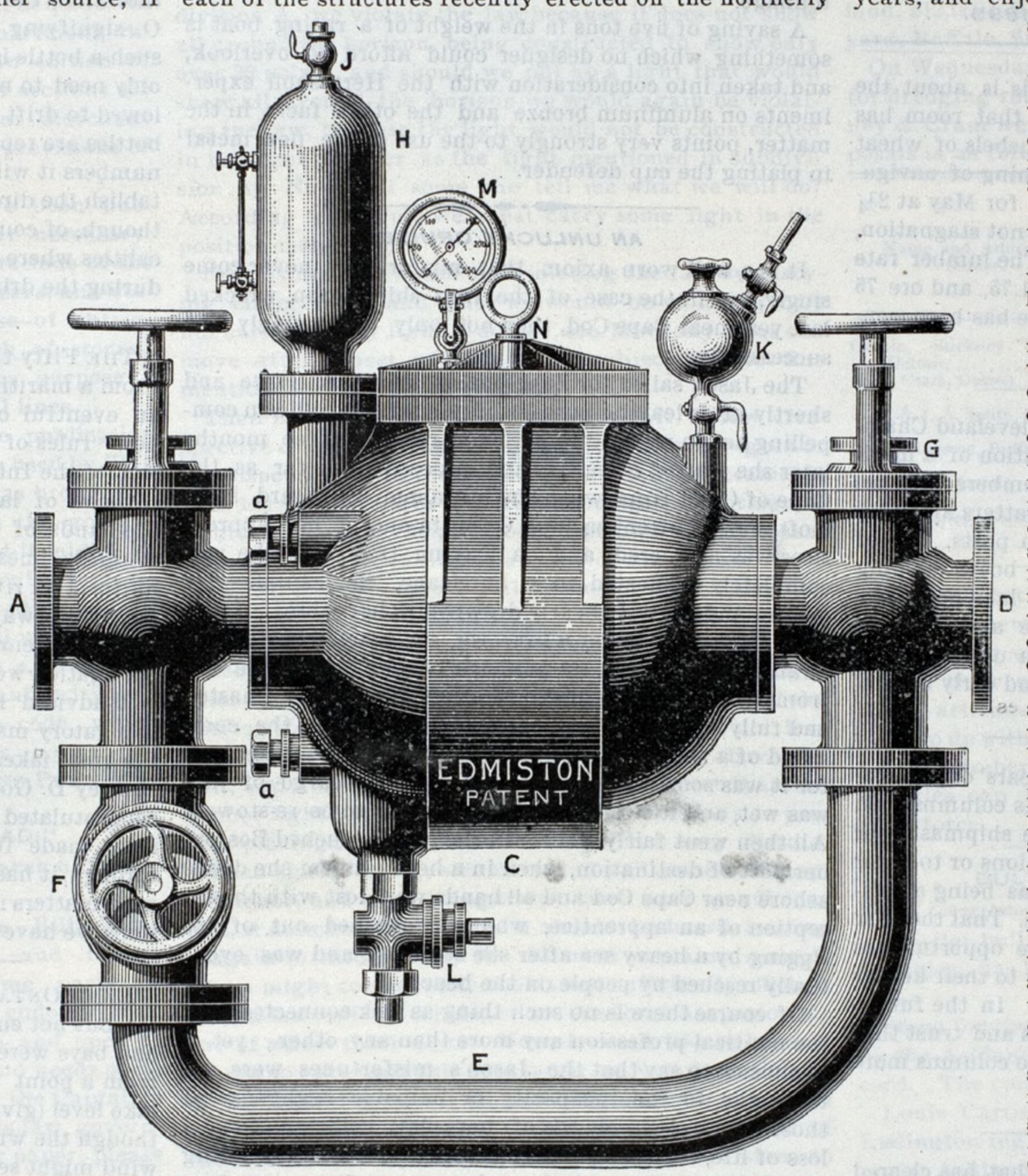
It is a well known fact, that to operate boilers, when carrying the higher pressures of steam, it is essential that the internal surfaces of the boiler should be kept as free as possible from oil, scale and other deposits. This requires that the feed-water used must be thoroughly filtered.

Realizing the necessity of an absolutely reliable and efficient system of feed-water filtration, and after experimenting and using for years many different appliances, including hay, coke, and sponge filters, and the so-called "separators," "extractors" and "eliminators" located in the exhaust pipe,none of which were found to give satisfactory results, the Wheeler Condenser & Engineering Co., New York, finally adopted the Edmiston filter after thoroughly investigating the best systems in use here and abroad.

Pure feed-water is of the utmost importance both to the engineer and owner, as it insures clean boilers and the highest efficiency, and a longer life of the boiler. It matters little if the supply is obtained from the hot-well of the condenser, or direct from some other source, if the water used for evaporation is not pure; means must therefore be taken to protect the boilers from the action of all and any deposits that are likely to be injurious, as in many cases the burning and collapsing of furnaces is due to this cause.

From a large number of experiments made with Edmiston's Patent Filter in connection with high and low pressure boilers, it has been found that the oil or greasy matter was arrested by the filter, together with other deposits, including oxide of copper, iron lead, tin, silica, fine sand, and other foreign matter—all highly injurious to boilers. The following advantages, as claimed by the manufacturers, the Wheeler Condenser & Engineering Co., 39 and 41 Cortlandt street, New York, are derived by the use of the Edmiston Feed-Water Filter: A prevention from burning and collapsing of the furnaces through deposits of grease; a means for the removal of highly non-conductive deposits; a material help in reducing the quality and thickness of scale; a valuable addition to the means of preventing corrosion.

The use of the Edmiston feed-water filters have, in every case, been highly satisfactory, and the results are obtained by a simple machine, easily looked after, occupying little space, not liable to get out of repair, and moderate in first cost. The success of the "Edmiston" has induced the British, Russian, Austrian, Italian, Spanish, Argentine, Brazilian, Chilian and other governments to use them on their war vessels. These filters are also in use on several hundred merchant steamships throughout the world, among which are some of the largest trans-Atlantic liners.



THE EDMISTON PATENT FEED-WATER FILTER, ADMIRALTY TYPE.

The Edmiston feed-water filter, as shown in the illustration, and in use on the White Star Liners, Majestic and Teutonic, is the single type, having a by-pass connection and valves. The water from the feed-pump enters at the opening "A" and passes directly into the body of the filter through a series of chambers separated by diaphrams of filtering material and thence out through outlet nozzle "D" to the boiler. The by-pass pipe "E" and valves "F" and "G" are for use when the filtering material requires cleaning or renewing, thus permitting a continuous operation of the feed-pump. The filtration is effected by the feed-water first passing through a perforated plate, then through coarse cloth, the latter being held in place and supported by a perforated brass plate, then through another series of chambers separated by similar diaphrams of filtering material, but of finer texture.

The plates to which the filtering materials are secured are carefully fitted and securely held in place by set screws "a" thus insuring water-tight joints. The air chamber "H" is provided with scum cock "J," which is opened when the glass water gauge indicates an accumulation of oil. The soda cock "K" is fitted with a steam connection for the purpose of removing oil and dirt from the filtering material by boiling and blowing out through the sludge cock "L." The gauge "M" indicates the pressure in the filter chamber, the normal pressure being between two and five pounds above boiler pressure. When the pressure rises above five pounds, the by-pass connection is opened and the filter inlet and outer valves are closed, thus allowing the feed-water to reach the boiler without going through the filter while the latter is being cleaned.

NOTICE TO MARINERS.

MAUMEE OUTER, MIDDLE AND INNER RANGE LIGHT-STATIONS.—Notice is hereby given that, on the opening of navigation, 1895, and the establishment of the Manhattan Range Lights, the lights of these three ranges, on the W. side of Maumee Bay, and on SE. bank of the Maumee River, will no longer be required as aids to navigation and will be discontinued.

MANHATTAN RANGE LIGHT-STATION.—Notice is hereby given that, on the opening of navigation, 1895, a fixed red light, of the sixth order, will be established in each of the structures recently erected on the northerly side of the mouth of the Maumee River, below the city of Toledo, and on the southwesterly prolongation of the axis of the new straight channel in Maumee Bay, leading SW. by W. ⅛ W. from the main crib of the Maumee Bay Ranges Light-Station to the natural channel entrance to the river.

Each light will be visible from S. 77° 15′ E. (ESE. ⅞ E.) through northward, eastward and southward to N. 12° 45′ E. (N. by E. ⅛ E.), or 135° to the northward and 135° to the southward of the range line.

Each beacon is a square white pyramidal wooden structure with green window shutters, and is surmounted by an octagonal lantern with red roof.

The front beacon is entirely inclosed and stands on a platform, about eight feet above the water, on a substructure of red iron piles in three feet of water, 25,549 feet (about 4 5-6 miles) SW. by W. ⅛ W. from Maumee Bay Ranges (front for both) Light, and about 500 feet northeasterly from the southerly end of the marsh known as Grassy Point.

The focal plane of the front light will be 28 feet above the mean level of the river, and its approximate geographical position, as taken from Chart No. 73 (Lake Erie Coast Chart No. 7) of the U. S. Survey of the Northern and Northwestern Lakes, is: Latitude, north, 41° 41′ (36″); longitude, west, 83° 28′ (26″). The rear beacon is a skeleton structure, excepting that the section immediately below the lantern is inclosed on a low foundation of concrete piers, near the water on the slope of the river bank and the old canal bed at Manhattan Point, North Toledo, and 3,470 feet SW. by W. ⅛ W. from the front beacon.

The focal plane of the rear light will be 53 feet above the mean level of the river, and its approximate geographical position, as taken from the above-named chart, is: Latitude, north, 41° 41′ (18″); longitude, west, 83° 29′ (04″).

Bearings are true, and distance is in statute miles.

By order of the light-house board.

JOHN G. WALKER,
Rear-Admiral, U. S. Navy, Chairman.

SHIP CLASSIFICATION AND SURVEYORS.

CHICAGO, March 5, 1895.

To the Editor of The Marine Record:

In the issue of THE MARINE RECORD of the 28th ult. I note with some surprise the views of W. J. W. on the existing classification societies of the great lakes, all of which, in his opinion, are unreliable and unfit as guides to good shipbuilding, notwithstanding one of the said classification societies in question has flourished for 70 years, and enjoyed a world-wide reputation for honest and intelligent work.

Another society's work he condemns because, as he asserts, they have copied their rules from Lloyds, and he advocates a class register for the lakes with rigid and arbitrary rules, but ignores all previous methods of shipbuilding.

He also advises the shipowner to employ experts outside of classification surveyors to watch with untiring zeal the wicked shipbuilder, in whose integrity he has no confidence.

But this man, who asserts that one must delve with might and main for a term of 12 years with the "hammer, chisel and mallet" as a foundation to the qualification of a surveyor of ships, not only sweeps every classification society from the lakes, but suggests that the retired should get off the earth, as well, for presuming to know anything of the construction and requirements that constitute a seaworthy ship. He has a fellow-feeling and great respect for the shipmaster—particularly so the lake shipmaster—so long as he sticks to his ship and does not meddle with his vocation as a designer and surveyor of ships.

If this knight of the "hammer, chisel and mallet," who is bubbling over with technical knowledge in the art of shipbuilding, will come down from his high perch and examine Lloyds' and the Bureau Veritas Register he will find a long list of inspectors and surveyors, and among them many retised shipmasters, who have by close application made themselves conversant with the requirements of modern shipbuilding as set forth by the rulss and tables of the societies they represent, which, when coupled with a score or more of years in command of various ships, eminently fits them for surveyors of ships.

If the unbeliever in the abilities of the shipmaster would call on some of the leading ship owning firms of Liverpool, England, viz: Messrs. Leyland & Co., John Herron & Son, Harris & Co., E. Bates & Co., T.C.Suley and many others that could be named, and asked who they employed as superintendent of their new steel ships while in construction, he would acknowledge he was wise in his own conceit only, and that the retired shipmaster is deservedly held in high esteem by the company he represents, for his knowledge and skill in directing the work to a satisfactory termination.

Some of the most successful wooden shipbuilders of the state of Maine are retired shipmasters, and possess a technical knowledge of the art of shipbuilding.

Many retired shipmasters are employed by insurance companies, both on the continent and in this country, and we have most flattering evidences of the faith of the underwriters in the good judgment of their men concerning the risks they are asked to consider.

In conclusion I think we have demonstrated the fact that a shipmaster who has applied himself to the study of the art of shipbuilding is a most suitable man for a surveyor of ships. And in regard to the service with the hammer and chisel, we know that there are hundreds of men in the various shipyards of the world that have worked with the hammer and chisel from youth to old age, and still back the qualifications and experience required of a good surveyor, and I think your reader will agree that the 12 years' service with the hammer, chisel and mallet has as much to do with the qualifications of the surveyor as the man who carries the bricks and mortar has to do with the making of the eminent architect.

A RETIRED SHIPMASTER.

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ESTABLISHED 1878.

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CLEVELAND, O., MARCH 7, 1895.

SO FAR as chartering is concerned, this is about the quietest spring on record. It is correct that room has been taken at Duluth for two million bushels of wheat for shipment to Buffalo on the early opening of navigation, and that tonnage is being offered for May at 2¼ cents; but there is a general inactivity, if not stagnation, as compared with previous seasons. The lumber rate from the head of the lakes is nominally $1.75, and ore 75 cents, but it is not yet known that any ore has been contracted for at this figure.

THE committee on navigation of the Cleveland Chamber of Commerce, recommends the formation of a maritime board consisting of those of its members who are specially adapted to take cognizance of matters affecting the mercantile marine, not only of Ohio ports, but of lake interests generally. With such a board holding regular sessions at each of the principal lake ports, untold advantages from a municipal, state and national standpoint would inevitably result and a unanimity on any subject would mean its successful and early accomplishment.

THE RECORD throughout its seventeen years' of publication has invariably and consistently held its columns open and as free to the marine engineer as the shipmaster or pilot when desiring to express their opinions or to enter into an advocacy of any new departure as being an improvement on former or prevalent customs. That the deck officer has taken more advantage of these opportunities in the past than the engineer, is due solely to their keener perception of the power of printer's ink. In the future we desire to hear more from the engineers and trust that their views will find expression in these columns more frequently than in the past.

LIVERPOOL has a new hopper dredger that has cleared away from the bar at the mouth of the Mersey from thirteen to fifteen thousand tons of silt each day. One or two formidable dredgers of this type on the lakes would make our past and present efforts at dredging look very puny, as indeed they actually are. There are wealthy men and firms among our dredging contractors, who, if they would only respond to the necessities of the times, might bring the cost of dredging down so that fair depths would be maintained at points now almost permitted to silt up to the water level on account of the outlay required to keep good water through dredging. As regards the combine which dredging contractors on the lakes are generally credited with being concerned in so that a high scale of prices may be kept up, we can hardly believe that the forty or more contractors are unanimous on this or any other point, but even if the majority are combined, the day is near at hand when an important break away from the ranks and some such a craft as the Liverpool dredge Brancker will be put afloat on the lakes, then any combination to support inferior appliances by keeping up high prices will necessarily fall through. It is quite time, however, for a long step in advance to be taken in the matter of dredging outfits.

ALUMINUM IN SHIPBUILDING.

The apparently well-founded report that the material for plating the new cup defender would come from the Pittsburg Reduction Co., of Pittsburg, Pa., gives good reason for the belief that the boat will have a plating of aluminum bronze.

Aluminum bronze is a metal not as yet widely known in the arts, and certainly has never been applied to the plating of yachts or ships, but that it is a practicable metal and can be worked as easily as Tobin bronze, has at last been demonstrated. The Herreshoffs have experimented largely and carefully on aluminum before, so that its use by them in the cup defender would not be any more of an experiment than was the use of Tobin bronze in the Vigilant.

Aluminum bronze has in it only a small percentage of aluminum, perhaps four to six per cent, so that its weight would not differ materially from Tobin bronze of the same thickness. It is known that aluminum bronze has been produced with a tensile strength of 120,000 pounds to the square inch, and such a metal ought to be thoroughly efficient for building light or moderate sized tonnage.

A saving of five tons in the weight of a racing boat is something which no designer could afford to overlook, and taken into consideration with the Herreshoff experiments on aluminum bronze and the other facts in the matter, points very strongly to the use of the new metal in plating the cup defender.

AN UNLUCKY CRUISE.

It is a well worn axiom that misfortunes never come singly, but in the case of the iron ship Jason, wrecked last year near Cape Cod, they not only came singly but successively.

The Jason sailed for Zanzibar on her last cruise and shortly after leaving port got into a serious collision compelling her to return to port for repairs, three months later she started out again and proceeded as far as the Cape of Good Hope when she lost a man overboard from aloft, shortly after reaching Calcutta one of her apprentices was murdered, and on leaving that port she was completely dismasted in a hurricane, the captains leg broken and his wife nearly drowned in her cabin. Going into Mauritius under a jury rig, she narrowly escaped stranding, and while in port her senior apprentice fell from aloft and was killed. She left Mauritius remasted and fully equipped three months later under the command of a new captain, but still her luck was not changed for it was soon discovered that her whole cargo of jute was wet, and it swelled so that it had to be re-stowed All then went fairly well until she nearly reached Boston, her port of destination, when in a heavy storm she drove ashore near Cape Cod and all hands were lost with the exception of an apprentice, who was washed out of her rigging by a heavy sea after she stranded, and was eventually rescued by people on the beach.

Of course there is no such thing as luck connected with the nautical profession any more than any other; yet, it is difficult to say that the Jason's misfortunes were entirely due to the incapacity or culpable negligence of those who were in charge of her—first collision, then a loss of life, becoming totally dismasted, and finally taking all hands with her, except one boy, was a fitting wind-up to so unlucky, if not murderous a craft as the Jason seemed to be. Perhaps if she had lived longer it might only have been to perpetrate more fatal blunders.

NIGHT SIGNALING.

It would seem that we are taking a leaf out of the Indian's book in our efforts to flash information over long distances, only that the aborigines of this country used the orb of day to produce and shadow signals, while the modern method is to signal by means of electricity.

A few days ago the initial attempt to announce by searchlight the approach of a gale and a cold wave was made from the top of the Auditorium building, Chiaago, and the result was a vindication of Secretary Morton's policy in ordering the light placed in position, and of Prof. Moore's assertion that it would fulfill the expectations formed by the principals of the Weather Bureau.

In the first test a white flash was used, succeeded by a green light, which in a single revolution illuminated a circuit of forty miles in diameter over lake and land alike, and farmers over twenty miles away from the city of Chicago read clearly the signs given by the aid of the electric light. Tests of the same nature have also been made in New York and the result has been equally satisfactory with those made in Chicago.

The signals when in actual working order will indicate approaching winds and will not be used as rain or snow signals. The red light alone will signify easterly winds and hurricane, white light a frosty morning; red and white, high westerly winds; a flash light with green shade will indicate a cold wave.

OCEAN CURRENTS.

The currents of the ocean are not as well known as they ought to be, and to further determine the set and drift, the United States Hydrographic Bureau are now using regular bottle mails to establish data relative to ocean currents. The ordinary bottles formerly used will not do, as but few of them are ever picked up. Either they break or they sink if the salt water eats through a flaw in the cork, or barnacles fasten themselves on the under side until the bottle sinks. The bottles used now are large, and specially ballasted so that they always float upright. A small sign is attached to the neck to attract attention, the inscription thereon showing the letters H. O., signifying Hydrographic Office, and a number. When such a bottle is sighted in mid ocean, the ship's officers only need to note the number of the bottle, which is allowed to drift on. If position and time of sighting such bottles are reported to the hydrographic office in sufficient numbers it will be possible to calculate the drift and establish the direction of ocean currents almost accurately, though, of course, some allowance will be necessary in localities where the winds blow steadily from one direction during the drift of the bottle.

THE Fifty-third Congress came to an end this week. From a maritime standpoint the session has been rather an eventful one. First in point of importance are the new "rules of the road" for lake use; next is the suspension of the International Maritime Conference rules, the revision of laws on measuring vessels, power placed in the hands of the Secretary of the Treasury to remit or mitigate fines and penalties on vessels, an act to make uniform all river and harbor laws and the navigation of local waterways, as well as legislation to facilitate the registry or enrollment of a vessel. The Commissioner of Navigation worked faithfully and well to correct, through well-advised legislation, certain laws which acted in a derogatory manner to shipping, and the shipmasters of the great lakes, ably advised in their consultations with Harvey D. Goulder, Esq., Proctor in Admiralty, are to be congratulated on their energetic action in having special rules made for lake tonnage. Taking the session all through, it has been a fairly good Congress in its dealings with matters maritime. With its bearing in other directions we have nothing to say.

LAKE ONTARIO has had more ice than usual this winter, but not enough to prevent navigation if the harbors and bays were open. On March 2, to an observer looking from a point on shore at Oswego about 100 feet above lake level (giving a 13-mile view) no ice was in sight, although the wind was inshore. A long-continued westerly wind might send along a loose ice-pack one to two miles wide, but blue water and white-caps are the prevailing winter fashions on Lake Ontario.

NEW DISPLAY STATION.

U. S. DEPARTMENT OF AGRICULTURE,
WEATHER BUREAU, WASHINGTON, D. C.,
March 1st, 1895.

A wind-signal display station of the Weather Bureau will be established at Fairport, Ohio, displaying day signals only, repeating the signals ordered for Cleveland, Ohio.

MARK W. HARRINGTON,
Chief of Bureau.

N. B.—Arrangements are not yet completed, but signals will likely be displayed at the office of Mr. Irwin.

MIDLAND, Ont., has about decided to build a drydock 400 feet long and 150 feet wide, with 16 feet of water over the miter sill.

THE two Government battleships, the Brooklyn and Iowa, are now well under way at Cramps' yard, though their launch will hardly occur before eighteen months have elapsed.

CORRESPONDENCE.

☞We do not hold ourselves responsible in any way for the views or opinions expressed by our correspondents. It is our desire that all sides of any question affecting the interests or welfare of the lake marine should be fairly represented in THE MARINE RECORD.

THE INTERNATIONAL CODE OF SIGNALS.

CHICAGO, ILL., March 5, 1895.

To the Editor of The Marine Record:

I desire to take some exceptions to a leading article in THE RECORD of February 21, treating upon the international code of signals. I freely admit that THE MARINE RECORD is correctly informed as to the history of "The International Code of Signals," and I except only so much as refers to the part taken by the Hydrographic Office, Bureau of Navigation, Navy Department.

Some years after the international code had been adopted by the more important maritime nations, an edition was published by the Bureau of Navigation, Navy Department, for use on board our men-of-war. As all the Lloyd signal stations, and a large proportion of the vessels of other nations, used this code, the copies issued by the navy department were in great demand. In 1889 the Bureau of Navigation, Navy Department, directed the hydrographic office to publish an edition of the international code, under authority of sections 431 and 432 of the Revised statutes, so that our merchant marine might procure it, under the liberal provisions of section 432.

Since 1889, new editions of the code have been published by the hydrographic office whenever necessary. The code has been in use at many of the stations of the weather bureau along the coast for some years, and vessels communicate with them for the purpose of obtaining information concerning the approach of storms, weather conditions in general, and for the purpose of sending telegrams to points on commercial lines.

The word "purloined," as applied to the publication of the international code can not have been used by THE MARINE RECORD advisedly, for the code was brought to the attention of the maritime powers by the governments of Great Britain and France, so that it might be used generally. As to the enactment of legislation on the subject, the necessity is not apparent. Why should a system of flags or signals for commercial use be legalized, enforced or permitted, any more than a telegraph code or a book on navigation? The only authority necessary was that for the publication of the code, which was ample under sections 431 and 432, R. S.

PRO BONO PUBLICO

THE NEW "RULES OF THE ROAD."

CLEVELAND, O., March 6, 1895.

To the Editor of The Marine Record:

Having received a copy of the White Bill, Rules to govern lake pilots in the future, and taking effect on the first day of March, some parts of which seem to me (a lake pilot and only endowed with ordinary perception) as very ambiguous and open to misconstruction and to the ordinary mind needs some explanation, and so ask if Mr. Goulder or the Captain's Association who are the sponsors of this law governing us in the future, will, through your paper, please throw a little light on the subject.

Rule 2 says the lights mentioned in the following rules and no others shall be carried in all weathers from sunset to sunrise.

Rule 3 seems correct; it provides for a central range and everything else to perfection when alone and under way.

Rule 4 describes what lights a steamer shall carry when towing anything other than a raft (which is otherwise provided for). It says that steamers shall carry an extra light at the foremast head of the same character and description as the other and not less than six feet higher or lower than the other foremast head light, and a small light aft not to be seen forward of the beam for the tow to steer by. Now, here is where the uncertainty comes in: This Rule 4, is separate and distinct; it lays down the law of what lights a steamer shall carry and no other when towing; it does not say we shall dispense with the central range, as provided in subdivision E of Rule 3, to when steamers are alone and under way and over 150 feet in registered length. It also makes no provisions for carrying side lights as in Rule 3, subdivisions B and C, of course we imply, we must, so we should also imply to be consistent that we should carry the central range when towing, but would it be safe to imply as the law imposes a fine of $200 for violations of any part of the White Bill, and as it is specific in its language it would be doubtful if any two persons would draw the same inference from the language when it would be to their interest to construe it otherwise; for instance a steamer with a tow whose side-lights was not burning might say, if having a collision, that he was carrying all the lights the law provided for when towing and some courts by taking the letter instead of the spirit of the law might sustain him.

In subdivision E of Rule 3, it reads: A steamer of over 150 feet register length shall also carry when under way an additional bright light, similar in construction to that mentioned in subdivision A, so fixed as to throw a light all around the horizon, etc. Now, let us consider, for a light to show all around the horizon it would have to show over 32 points of the compass or horizon. The light mentioned in subdivision A is so constructed as to show a light over 20 points of the compass. Now, if we put a light in the place mentioned in subdivision E, constructed as the light mentioned in subdivision A, we violate the law because it does not show all around the horizon, being constructed to show only over 20 points, and should we put up a light that would show all around the horizon we would again be violating the law, because the light would not be constructed in the same manner as the light mentioned in subdivision A. Now, will some one tell me what we will do? According to the rule we must carry some light in the position mentioned.

Now, since we would be violating the law by carrying either light, and since we would be violating it by not carrying any light, I do not see how any boat can move after sunset without being subject to the fine mentioned in Section 2, Rule 28.

Then Rule 5 for a steamer having a raft in tow irrespective of length, makes no provisions for sidel-ights or the dispensing with the central range light, if steamer is over 150 feet in length it merely specifies two horizontal lights at a certain height above the hull and dispenses with the two vertical lights as provided in Rule 4.

In Rule 6 it provides a sailing vessel shall carry the side-lights as provided in Rule 3 which leaves no room for misconstruction.

Section 2, of Rule 9, provides exhibiting in steamers when at anchor a light forward showing all around the horizon for steamers over 150 feet in length, not less than 20 feet and not over 40 feet in height above the hull, and a light aft not less than 15 feet lower than the anchor light forward, but there is no provisions to prevent placing it as high above as inference may dictate.

Then again, in fog, steamers and sail vessels for use, at anchor, and when being towed, shall have an efficient bell, it does not say how far it should be heard, leaving it again to inference by the different captains, some of whom might consider the cook's bell sufficiently efficient or to a law suit to decide, or to the local inspector, no two of whom think alike. Now, I would like to know if we are to take each rule separately as Rule 2 prescribes, or else are we to take it all as a conglomerate mass and each man act according to his own construction of the law and rules, causing confusion and collisions to be settled by law suits in the courts. I would like to know as I am engaged in preparing pilots for their examinations during the winter months and sailing under those laws in the summer. The old rules of the road of the board of supervising inspectors were explicit, and the language gave no two meanings if they were made by men lacking experience in the forward end of the boat as claimed by some.

Another thing, all through the new law you will find reasons for misconstruction. You might say, why at this late hour find fault? Because we did not get any authenticated copies of the law until within a few days so as to be able to say a word. I merely am asking for information and not to find fault. Mr. Editor, will you please to give us your views on the subject if no one else will, and oblige, yours truly,

CAPT. SAMUEL W. GOULD AND OTHERS.

ARTICLES of incorporation have been filed at Lansing by the Soo Mill Lumber Co., with a capital stock of $300,000. This means that the Torrent mill at the Sault will be operated on a still larger scale this season than ever.

BIDS ON GOVERNMENT WORK.

On Friday, March 1, Col. Jared A. Smith, corps of engineers United States Army, opened bids for dredging the straight channel work at Toledo, which embraces 350,000 cubic yards of excavation. The amount authorized for this work is $40,000. James Rooney, of Toledo, was the successful man, bidding 11 cents on the inner and 13 cents on the outer section. Other bids were as follows: George H. Breyman & Bros., Toledo, 12.9 cents; Carkin, Stickney & Cram, Detroit, 13.5 cents; L. P. and J. A. Smith, Cleveland, 25 cents; R. J. Cram, Detroit, 25 cents; John Stang, Lorain, 21 cents; W. J. Daly, of Ogdensburg, 12.9 cents on all the work; Edward J. Hingston, Buffalo, 13.5 cents on the inner section and 18.5 cents on the outer.

Col. Smith opened bids on the same day for the removal and rebuilding of a part of the west pier at the entrance to Fairport Harbor. The bids included the price for all materials and work. J. B. Donnelly, of Buffalo, was the lowest bidder, and it was recommended that he be awarded the contract, at $10,921. The unsuccessful bids were as follows: C. E. Mitchell & Co., Ludington, Mich., $14,947; L. P. & J. A. Smith, Cleveland, $12,000; R. J. Cram, Detroit, $17,800; J. J. Churchyard, Buffalo, $13,389.35; John Stang, Lorain, $14,850.

On Wednesday, March 6, Col. Smith opened the bids for dredging rock at Ashtabula Harbor. Carkin, Stickney & Cram were the lowest bidders. The list of proposals is as follows:

Name and Address of Bidder.	Excavating Per Cubic Yd., for Rock Removed.	Furnishing, dredge, screws, and tug, and operating same, per hour.	Cost of Improvement at Rate Named.
Carkin, Stickney & Cram, Detroit	$ .97	$10.00	$28,857
R. J. Cram, Detroit	1 78	10.50	51,698
L. P. & J. A. Smith, Clevelan	1.79	11.00	52,059
E. J, Hingston, Buffalo	1.34	9.50	39,174
John Stang, Lorain	1.90	12.00	55,130
James Rooney, Toledo	1.36	12.50	38,896

THE Penberthy Injector Co. of Detroit, Mich., report that their new line of water guages, oil cups, etc., is meeting with so great a demand that they are somewhat behind their orders, although they have placed ten skilled artisans on their additional work since January 1. To keep up with their orders they now contemplate adding a large number of machinists to their payroll as soon as facilities can be completed to take advantage of the extra force.

DULUTH AND WEST SUPERIOR.

Special Correspondence to The Marine Record.

A boiler built at Manitowoc ten years ago for the tug Charnley, has been shipped here to be placed in a saw mill.

Stone for the Ashland breakwater will be furnished by the Ashland Brown Stone Co., on a bid of $4.10 per cord. The contract amounts to about $10,000.

Louis Cartier and Capt. Cartland have bought the Ludington tug Ray for $4,000 and will employ her in towing at Ashland.

The Lake Superior Elevator & Storage Co. has received a charter, with James Bardon, C. L. Catlin, and P. S. Butler as incorporators. Their capital stock is given as $10,000, and they will erect an elevator on the bay front.

Open water can already be seen from elevated points in the city. Some people are predicting an early opening on Lake Superior.

Local lumbermen in years past have been annoyed by thefts of logs in the harbor, but owing to the faulty construction of the state law, relating to log thefts, have been unable to prosecute successfully those who, they were sure, were the guilty parties. The legislature has been asked to pass a law making possession prima facie evidence of theft.

A large force of men are employed on the Standard Oil Co.'s oil tank barges in the American Steel Barge Co.'s yard. These barges are not whalebacks, but will be of the ordinary vessel type Launching ways are being placed under the steamer John V. Trevor, and she will be placed in the water as soon as the weather becomes milder.

Recent warm weather has almost entirely stopped logging operations.

CASE'S IMPROVED PROPELLER WHEEL.

(ILLUSTRATED.)

If there is one thing more than another that has been tried, tested, approved and condemned among marine appliances, it is the propeller. Helical twists of all descriptions and untold economy by the use of certain wheels has been heralded until patience with inventors has ceased to become almost anything but a virtue, yet the good work of experimenting goes on, and the marine world waits wide open to be astonished with some remarkable efficiency emanating from the brain of a propeller crank.

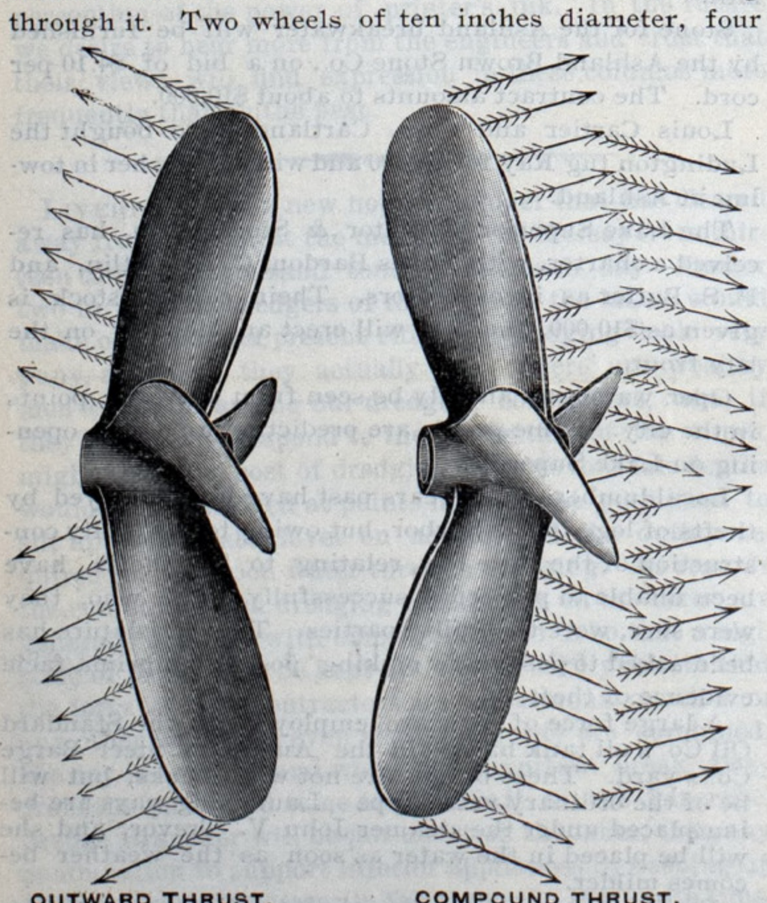
With this introduction we place before our readers an illustration of the Case improved propeller wheel, which at this date has been proved theoretically, mathematically, and practically, an economizer. The merits of the wheel permits of a compound outward and non-rotating thrust.

The object sought in the construction of this form of screw is to obtain, as far as possible, a solid backing or resistance to the blade of the screw while in motion, and by experimental tests it has been learned that the outward thrust principle as applied to the Case propeller wheel is the correct one, whether working in a liquid or under atmospheric conditions. It has been determined that the direct astern or concentrated thrust wheels do not have solid water resistance while in motion. Water thrust against by any one blade of these wheels is backed by water already put in motion by the preceding blade, consequently the wheels are working in a current of water moving in a line directly from the wheel. With the Case outward thrust wheel, the blades are backed by solid water or water outside of the course of the wheel and undisturbed by it

Propellers have been made with the ends of the blades curved forward to produce a divided thrust. The Case wheel differs from this as a crooked line differs from a straight one, and the difference in efficiency is found to be nearly as pronounced.

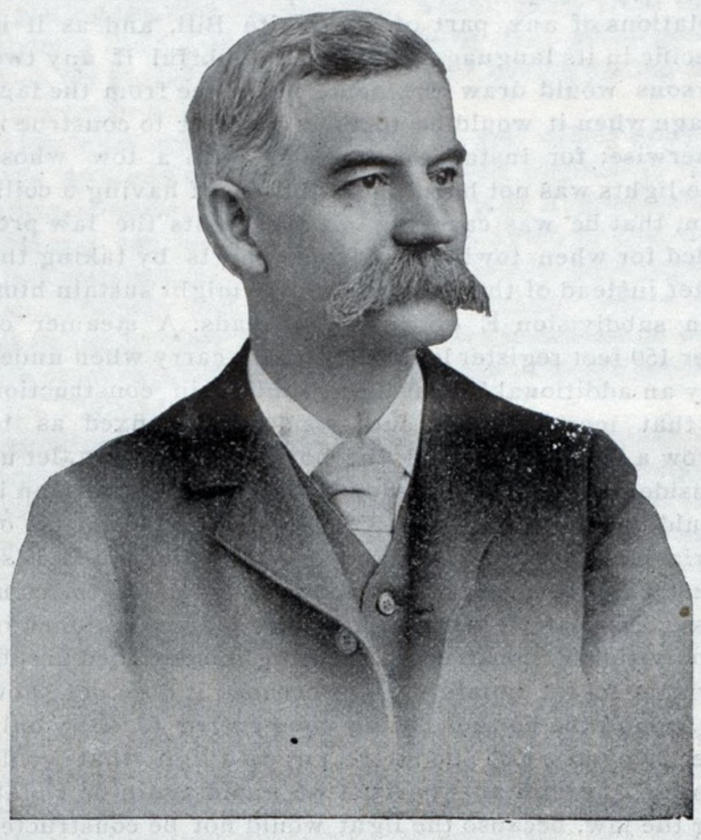
Mr. Case started out with a theory, like most other inventors, that an advantage could be gained by concentrating the water discharged from the wheel thereby making the body to be thrust against more solid. This was to be done by using a somewhat peculiarly shaped blade, inclining rearwardly.

Experiments were carried out as follows: A water tank of suitable size was constructed with a shaft running through it. Two wheels of ten inches diameter, four

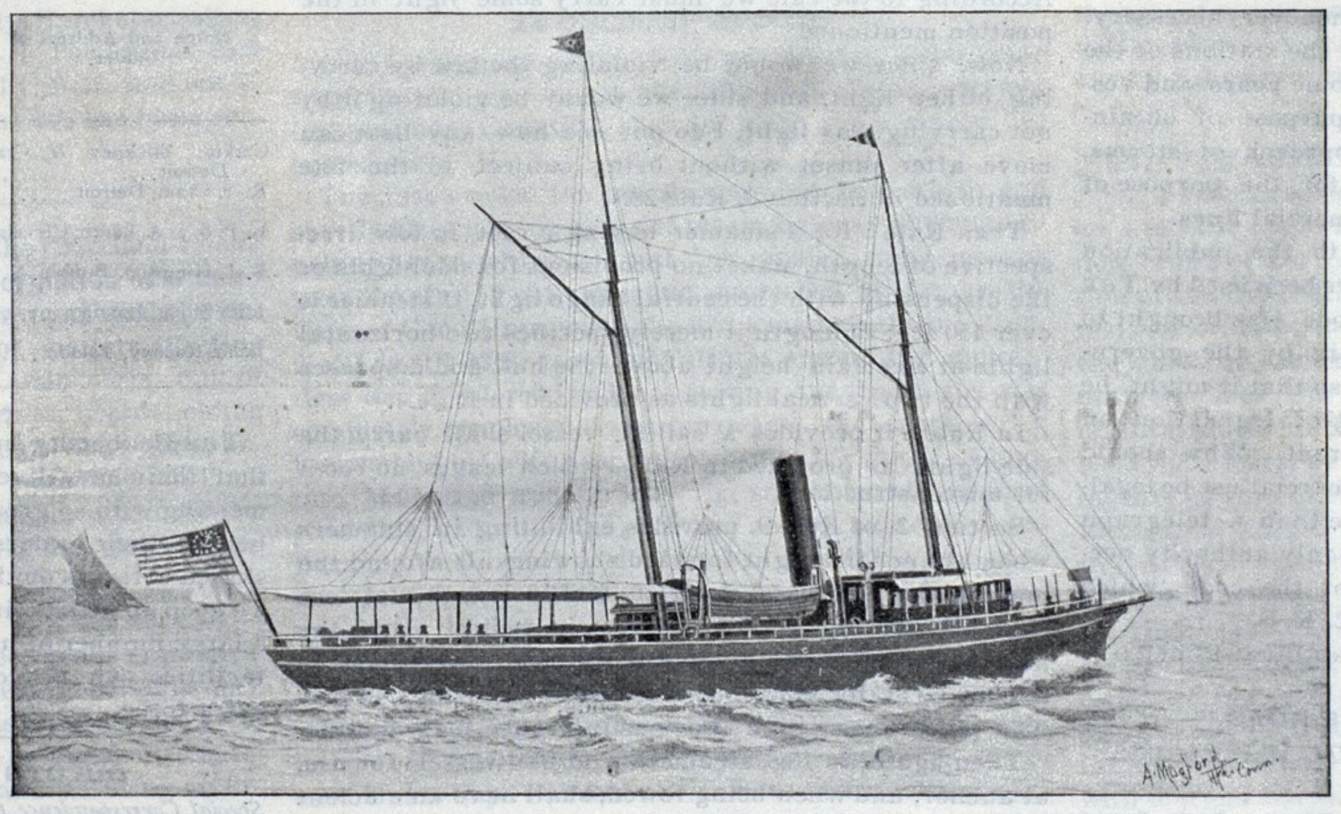


OUTWARD THRUST. COMPOUND THRUST.

blades each, had been made for the purpose, one right and one left hand, the blades being flat and the same on both sides one with blades inclining a little forward, and the other the same rearward. Both wheels were



A. WELLS CASE.



"ORIENTA" WITH CASE WHEEL, BREAKING THE RECORD.

placed on the shaft at a proper distance from each other. The tank was then filled, the wheels standing fully sixteen inches under water. The shaft was arranged so that it could move back and forth endwise. It was expected when the power was applied that the wheel with the blades inclining to the rear would draw the other back, but the opposite was the case. The result was disappointing, but interesting, and it was determined to weigh the difference between theory and practice. The method used in ascertaining the result was correct, and the exact thrust in pounds was obtained by the use of Fairbanks' scales.

The scales were arranged at the end of the shaft, to weigh the difference in the work each wheel was doing. When running to four hundred revolutions, the difference in thrust, as weighed off on scales, was a little over nine and one-half pounds, in favor of the outward thrust wheel.

Pursuing this line of experiment a little further, two wheels of eleven inches diameter and four blades each, with a total blade surface of 48¾ square inches was made. One wheel had flat blades straight out from the hub, the other with flat blades of same shape, pitch and proportion as the first, except that the blades inclined forward from the hub to the end of the blade, in order to produce an outward thrust. This wheel was tested in the tank with the following result: At a speed of 440 revolutions, the actual thrust produced by this wheel was 67½ pounds, as weighed off on Fairbanks' scales.

When this wheel was reversed on shaft so as to produce an inward or conical thrust, the conditions being exactly the same as before, the result in thrust was 56½ pounds, a loss of eleven pounds, or a gain of the outward thrust of over 19 per cent. The wheel with blades straight out from the hub was then put onto the shaft and tested under the same conditions as at the previous trials, with the following result: Thrust, 59½ pounds, or a gain of three pounds over the inward thrust principle and a loss of eight pounds as compared with the outward thrust.

It will be seen by these tests that inclining the blades rearwardly is bad practice; that making them straight out from the hub is better, but neither form is to be compared with the outward thrust in efficiency. Testing under atmospheric conditions, a shaft was speeded up to 2,800 revolutions per minute. The pressure was taken as when tested in water. Before reversing the wheel, a quantity of sawdust was placed at the front of the wheel while in motion to determine the course of discharge. The sawdust was drawn into the wheel and thrown outward as the form of blades indicated That being settled, the wheel was reversed and run up to 2820 revolutions per minute, as the indicator showed, producing an inward or conical thrust, the result being taken on scales as before The difference of thrust in favor of the outward thrust principle was over 18 per cent, or almost exactly the same per cent of gain as when tested in water.

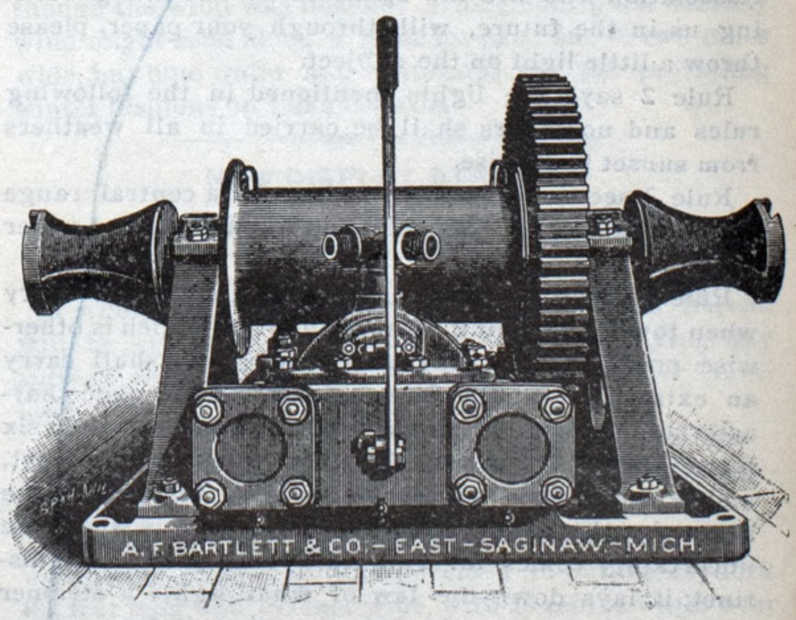
Mr. A. Wells Case, Highland Park, Conn., the inventor and patentee of the improved Case propeller wheel, stands ready to demonstrate the efficiency and economy of his invention, and any correspondence on this subject we are sure will meet with the inventor's courteous and prompt attention.

HOISTING ENGINES.

(ILLUSTRATED.)

Among the necessities of equipment in all modern tonnage are deck hoisting engines, several types of which are built at lake ports. The engine herewith illustrated is built by A. F. Bartlett & Co., Saginaw, Mich., and the demand for this powerful and compact deck hoisting engine has been such that the firm has just put into their plant new and special machinery for the manufacture, on a much larger scale than heretofore, of thesedeck hoisting engines and bilge pumps.

By means ofthese extra facilities, A. F. Bartlett & Co. have succeeded in cutting down the expense of manufacture about 30 per cent. and are consequently now in a position to quote very low prices on deck hoists and bilge pumps. The cylinders of these engines are 6 inches diameter by 7 inch stroke. The engines are well made in every particular, the connecting rods being all made of hammered iron, fitted with adjustable brass boxes and with each engine is furnished a full set of oil cups and lubricators. The latest order placed with A.



F. Bartlett & Co. for hoisting engines, and which is numbered in the shop as the ninety-seventh, is for Messrs. Knapp, Stout & Co., Rice Lake, Wis., to be used for handling logs and loading timber. The manufacturers will be pleased to correspond with any of their patrons requiring more deck power.

WILLIAM L. BROWN, President.

WALTER F. COBB, Vice President and Treasurer.

W. I. BABCOCK, Manager.
O. R. SINCLAIR, Secretary and Asst. Treas.

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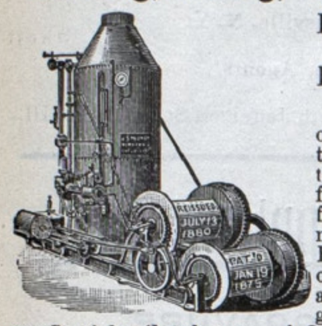

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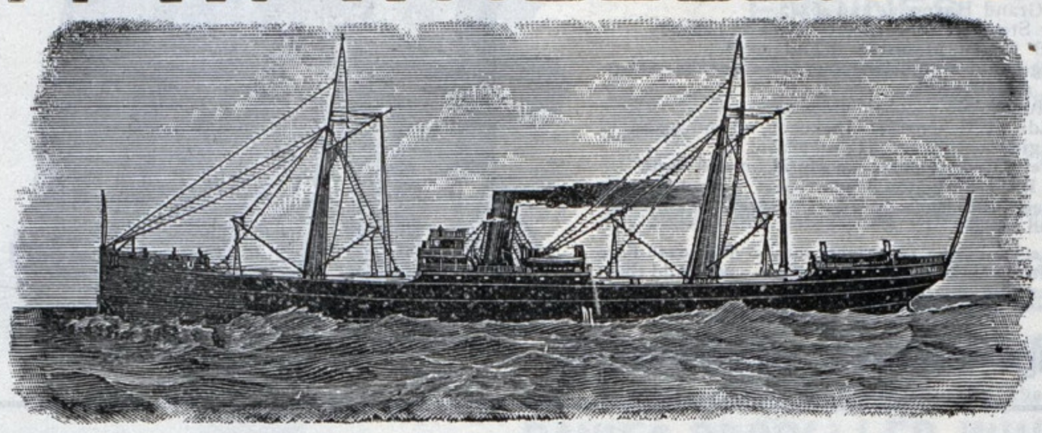

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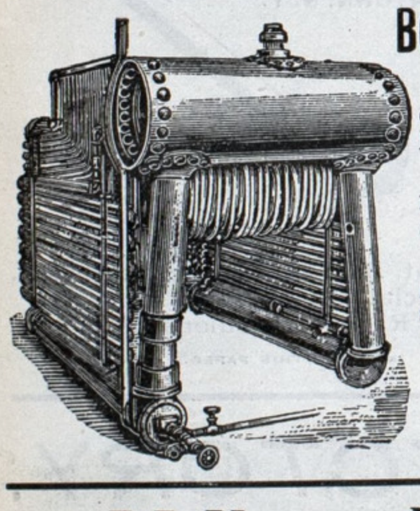

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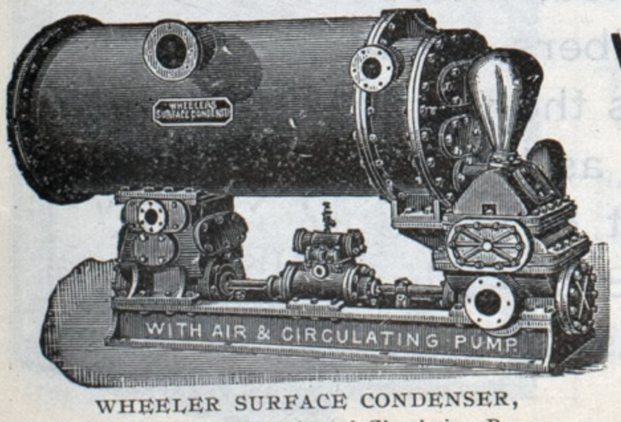

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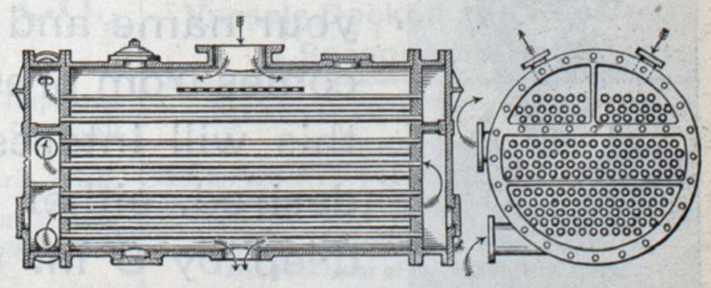

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U. S. ENGINEER OFFICE, 157 Ottawa St., Grand Rapids, Mich., March 5, 1895. Sealed proposals will be received here until 12 o'clock noon, April 4, 1895, and then publicly opened, for Breakwater construction at Petoskey, Mich., and for Pier extensions at Frankfort Harbor, Mich. Specifications furnished on application to G. J. LYDECKER, Lt. Col. Engrs. 10–10

U. S. ENGINEER OFFICE, Newport, R. I. February 9, 1895. Sealed proposals, in triplicate, for dredging on Green Jacket Shoal, Providence Harbor, R. I., in Taunton River, and in Hyannis, Edgartown and New Bedford Harbors, and Canapitsit Channel, Mass., and for removing ledge rock in Pawtucket River, R. I., will be received here until 12 o'clock, noon, March 20, 1895, and then opened. Full information furnished on application. W. H. BIXBY, Capt., Corps of Engineers, U. S. A. 8–11

TREASURY DEPARTMENT, WASHINGTON, D. C., February 26, 1895. Sealed proposals for building a steam launch, to be named "TYBEE," for the Revenue Cutter Service, will be received at this Department until 2 o'clock p. m., Wednesday, March 20, 1895. Bids must be in accordance with the instructions accompanying the specifications, be addressed to the Secretary of the Treasury, and be endorsed on the envelope, "Proposal for building a steam launch for the Revenue Cutter Service." Specifications and plans for the work will be furnished to parties desiring to submit bids upon application to this Department. The right is reserved to reject any or all bids and to waive defects if deemed for the interest of the Government so to do. C. S. HAMLIN, Acting Secretary. 10–11

U. S. ENGINEER OFFICE, Hickox Building, 185 Euclid Avenue, Cleveland, O., February 15, 1895. Sealed proposals for Cutting an Opening in Shore Arm of West Breakwater, at Cleveland Harbor, Ohio, will be received here until 2 o'clock p. m., standard time, Friday, March 15, 1895, and then publicly opened. All information furnished on application to JARED A. SMITH, Lt. Col., Engrs. 10–11

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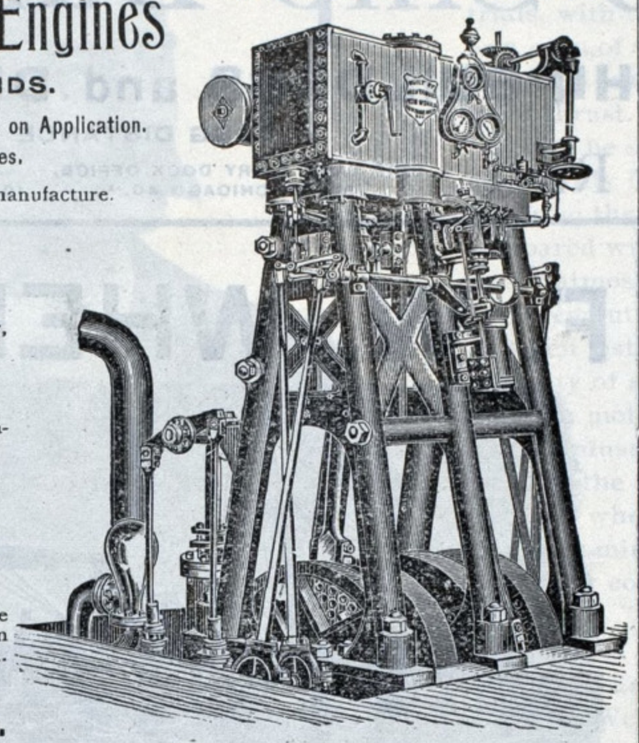

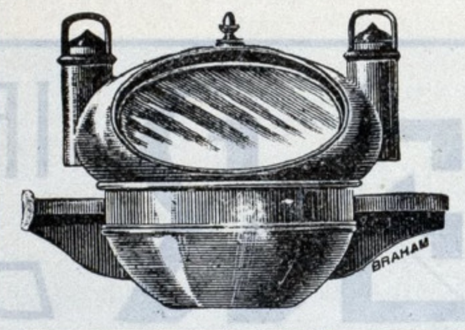

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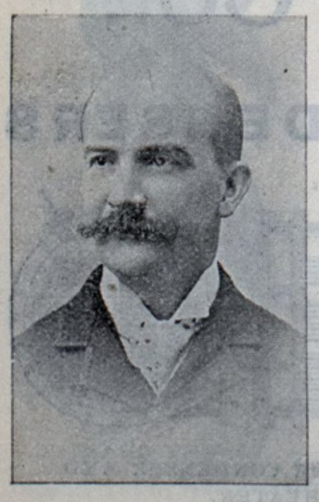

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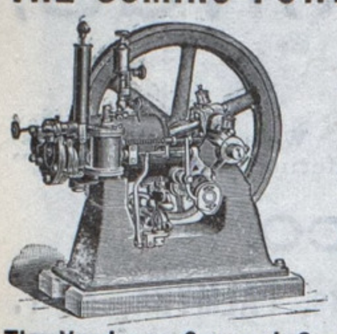

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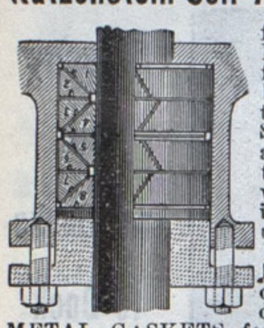

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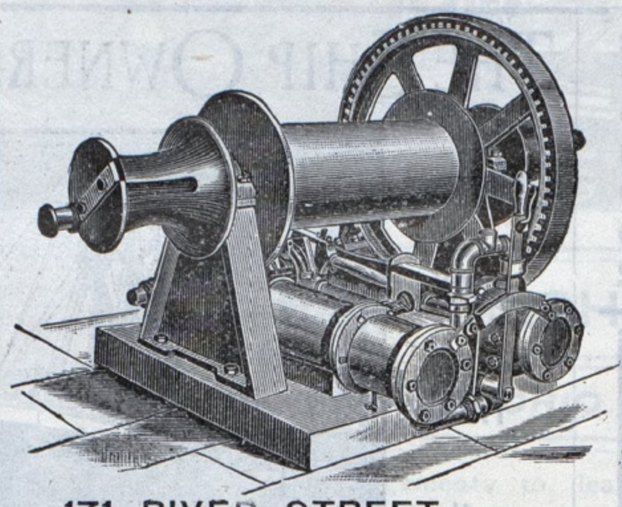

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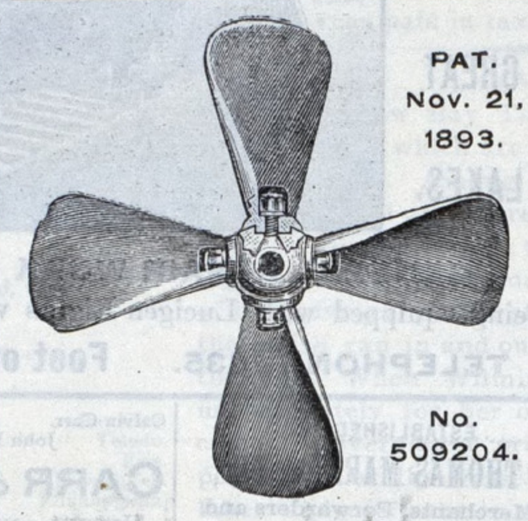

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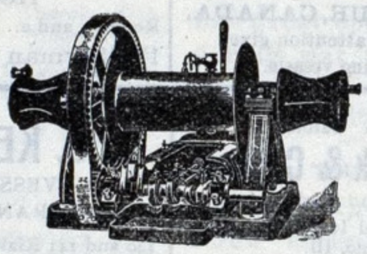

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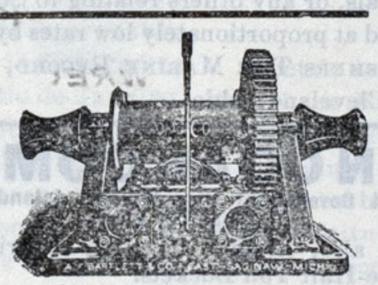

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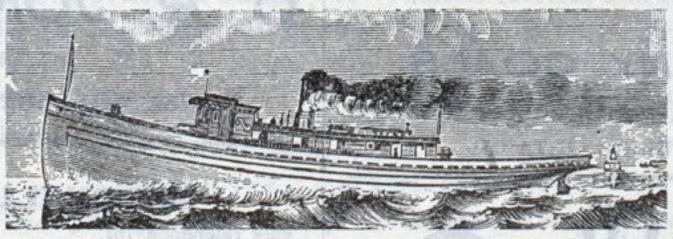

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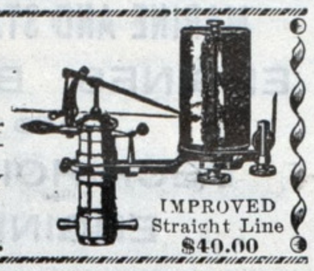

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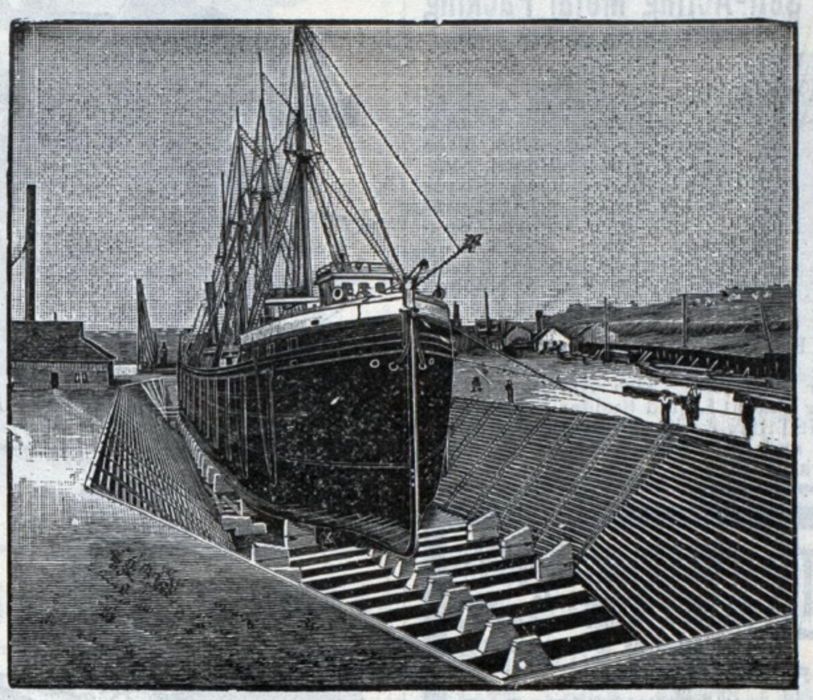

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